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Winter 2005

CS 240-01: Introduction to Computer Science

Eric Maston Wright State University - Main Campus

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Computer Science (CS) 240 Introduction to Computer Science

Winter Quarter 2005 Wright State University

Course Description

We will develop basic techniques to design, develop and implement programs using the C++ language. This course focuses on basic elements of programming and assumes no knowledge of programming in C++.

Goal

There are several goals to accomplish in CS 240:

- 1. Master basic coding techniques and skills in C++.
- 2. Learn how to use an Integrated Development Environment (IDE) such as Visual C++.
- 3. Learn how to develop software programs.
- 4. Have some fun!

Lecturer

Eric Matson

Office: 336 Russ Engineering Center

Phone: 937-775-5108

Office Hours: Monday 1:45 – 2:45 Tuesday 11:00 – 12:15

Email: eric.matson@wright.edu
Web: www.cs.wright.edu
~matson

Class

- Tuesday/Thursday 12:20 1:35 at Russ Engr. Center 150
- Lab each week This is required, so make sure that you are enrolled in a lab as well as the lecture section.

Text

Required: $Big\ C++$, Cay Horstmann and Timothy Budd (2005), John Wiley and Sons, Inc. ISBN: 0-471-47063-5.

Tools

Microsoft Visual C++ 6.0 Compiler is available at the library.

Required Work

Homework	30%	4 Programming Assignments
Lab	20%	8 Lab Assignments
Midterm Exams	25%	2
Final Exam	25%	1

Grading

The base scale is: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59. This is the highest requirement that will be used. The scales may be lowered or revised if necessary.

Policies and Notes

- Attendance: Attendance is not required, nor will it be taken after the first couple of lectures. If you are not a regular attendee, it will be your responsibility to seek out what material was covered in the lecture and learn it. Most of my exam questions will be taken directly from ideas covered during the lecture, so it greatly helps if you attend!
- I will utilize my CS web page (<u>www.cs.wright.edu/~matson</u>) to post updates to the course, sample code, projects, announcements, schedule, etc. Get in the habit of checking it regularly.
- There are no prerequisites for the course. Algebra and trigonometry are *co-requisites* for this class.
- Always make back ups of all of you work. Never have just one copy of anything!
- If you are going to miss an exam, for any reason, discuss it with me in advance. If it is an emergency situation, please notify me as soon as possible. Sleeping late after attending the 24 hour Monty Python movie festival is not considered an emergency!
- You can reach me a number of ways. Email is the best as I check it about 18 hours a day (normally). You can also reach me by phone during the day at 775-5108. If you need human contact either stop in during my office hours, make an appointment, or just come by my office. If I am in and not on a deadline to get something else completed, I will normally try to help as much as possible.
- There are technologies we will use in this class that you may not already know, such as working with Integrated Development Environments (IDE). We will cover some of these technologies as we go or they will be discussed in lab. If you have trouble, please don't hesitate to come and talk with me.
- The key to learning in this class will be spending time working through the problems. Don't wait until 2 hours before something is due to try to learn the concept and then write the program. This normally ends in a disaster! Stay up with the readings and try to work through some of the examples in the book. Some times, I will post what I call, "10 minute programs" which are exercises that you can work through to learn key concepts. And yes, they are programs you can write and execute in 10 minutes (unless you are a really slow typist, like me. In that case, they become "20 minute programs".)

Academic Misconduct

In this class, the only way to truly learn the concepts to is do the work yourself. I encourage working with other people on the course concepts. When you begin to write the program, complete and submit your own work.

Work that has obviously been copied or in the more extreme case, when the original author's name has not even been changed, both parties will receive a 0 grade for that assignment. Both parties will also be turned over to the Office of Judicial Affairs.

Schedule

#	Day	Date	Topic	Reading
1	T	Jan 4	Introduction	1
2	U	Jan 6	Number Systems, Data	App. F, 2.1 -
			Types, Variables, I/O	2.4
3	T	Jan 11	Arithmetic and String	2.5 - 2.6
			Expressions	
4	U	Jan 13	Objects	3
5	T	Jan 18	Flow of Control	4
6	U	Jan 20	Functions	5.1 – 5.6
7	T	Jan 25	Review	
8	U	Jan 27	Midterm Exam #1	
9	T	Feb 1	Software Design	5.7 - 5.13
10	U	Feb 3	Software Design	
11	T	Feb 8	Classes	6
12	U	Feb 10	Classes	
13	T	Feb 15	Adv. Flow of Control	7
14	U	Feb 17	Adv. Flow of Control	
15	T	Feb 22	Testing and Debugging	8
16	U	Feb 24	Review	
17	T	Mar 1	Midterm Exam #2	
18	U	Mar 3	1Dim Vectors/Arrays	9.1 – 9.5.3
19	T	Mar 8	1Dim Vectors/Arrays	
20	U	Mar 10	Multi-Dim Arrays	9.5.4
21	T	Mar 15	Final Exam 1:00 – 3:00	

Always have readings scheduled for that day complete prior to the class meeting

Note: T = Tuesday U = Thursday